



FINLAND – EDUCATION AND ENTREPRENEURSHIP

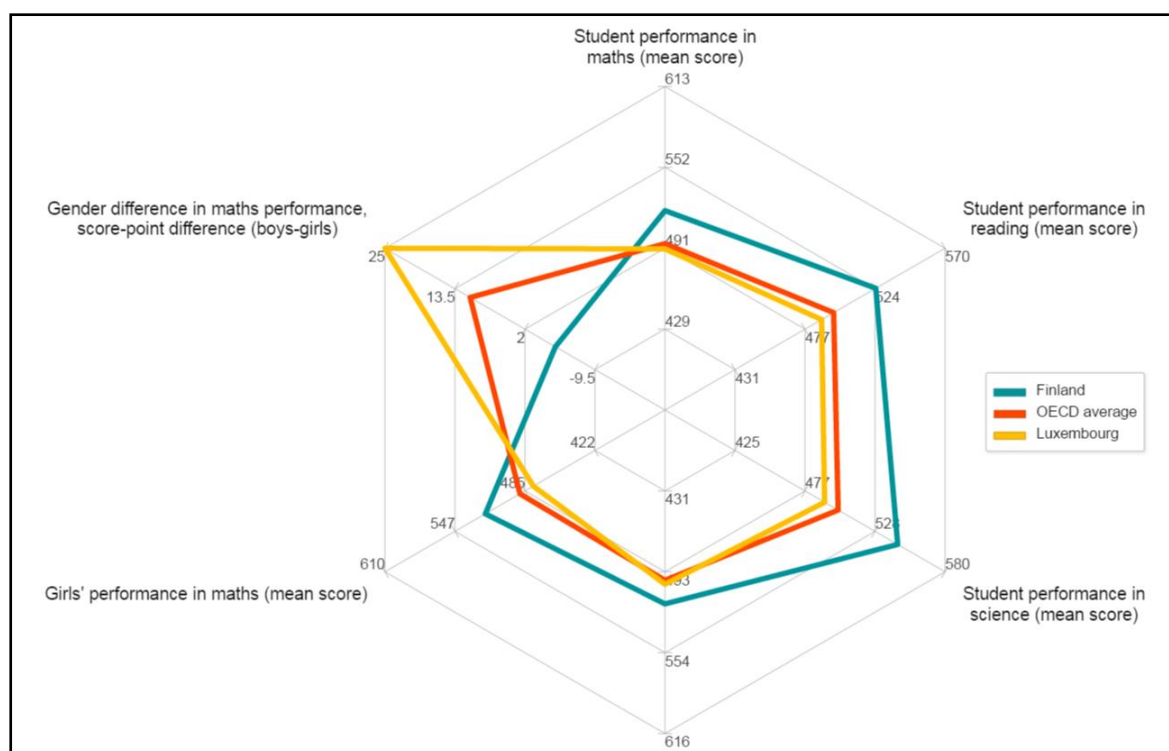
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The Finnish education model

In the 1950s the educational level of the Finnish population was low in Western European terms, even if everybody could read and write. The post-war baby boom put extra pressure on the educational system. The underdeveloped educational system was expanded and renewed as new universities and vocational schools were founded, and the number of years of basic, compulsory education increased. Education has been government run since the 1960s, available to all citizens and free at all levels.

Today, adult skills are high in Finland, and school results are good. Yet, the skills of 15-year olds, as measured by the OECD Programme for International Student Assessment, are declining. Between 2001 and 2012, the PISA studies have assessed the extent to which 15-year-old students acquired key knowledge and skills enabling them to fully participate in modern societies.



[PISA 2012](#): Luxembourg and Finland compared to the OECD average

Boys are increasingly falling behind girls, and second-generation immigrants do not perform better than the first generation¹. The reasons behind the fall in results are still unknown, but immigrants are too few to account for it. Tertiary education starts late and is completed slowly. Vocational education provides a pathway to work for students who are less inclined to pursue academic studies, but narrow qualifications and low foundation skills reduce adaptability to structural change.

¹ [National Audit Office of Finland](#), 2015

Governmental programmes and reforms

The government will launch programmes for life-long learning for teachers, update pedagogical approaches and use digital learning environments to allow a wider range of learning methods. Training in foreign languages will be stepped up. The government also plans to make vocational education and training more flexible by making it easier to switch between educational paths and easing the financial and administrative burden for apprenticeships².

Educational attainment is high in Finland, although progress has slowed and tertiary education attainment of the young is today below the OECD median. Speeding up entry and graduation would free up resources to accommodate more students. A joint national application to tertiary education will smooth transitions from upper secondary to tertiary education. Plans to reform the system of entrance exams that differ between universities and programmes should contribute further. Long completion times have been discouraged by stepwise reforms to student support and university financing, and the government plans to go further in this direction. Furthermore, the government intends to pave the way for more students entering working life with a Bachelor's degree by adjusting qualification requirements in the public sector³.

See also this [online video](#)⁴ about the basic education curriculum.

The new National Curriculum Framework (NCF)

As part the new National Curriculum Framework (NCF), which will be fully implemented in August 2016, Finland plans to replace the teaching of classic school subjects such as history or English with broader, cross-cutting “topics” as part of a major education reform. With the new basic school reform all children will, besides traditional subjects, learn via periods looking at broader topics, such as the European Union or 100 years of Finland's independence, which would bring in multi-disciplinary modules on languages, geography, sciences and economics.

According to the NCF, students must be involved in the planning of phenomenon-based study periods and must have a voice in assessing what they have learned from it. Integration of subjects and a holistic approach to teaching and learning are not new in Finland. Since the 1980s, Finnish schools have experimented with this approach and it has been part of the culture of teaching in many Finnish schools since then. This new reform will bring more changes to Finnish middle-school subject teachers who have traditionally worked more on their own subjects than together with their peers in school.

What should change in 2016 is that all basic schools for 7- to 16-year-olds must have at least one extended period of multi-disciplinary, phenomenon-based teaching and learning in their curricula. The length of this period is to be decided by schools themselves. Helsinki, the nation's capital and largest local school system, has decided to require two such yearly periods. [One school](#) in Helsinki has already arranged teaching in a cross-disciplinary way; other schools will have two or more periods of a few weeks each dedicated to integrated teaching and learning.

² Prime Minister's Office, 2015

³ Ministry of Finance, 2014

⁴ By Ms Irmeli Halinen, Head of curriculum development with Finnish National Board of Education, 2014

Education governance is highly decentralised, giving [Finland's 320 municipalities](#) significant amount of freedom to arrange schooling according to the local circumstances. Central government issues legislation, tops up local funding of schools, and provides a guiding framework for what schools should teach and how

Finland's [National Curriculum Framework](#) is a loose common standard that steers curriculum planning at the level of the municipalities and their schools. It leaves educators freedom to find the best ways to offer good teaching and learning to all children. Therefore, practices vary from school to school and are often customized to local needs and situations. Only the core curricula are designed for nationwide application.

Educators in Finland think that schools should teach what young people need most in their lives – a more integrated knowledge and skills about real world issues. To be able to provide the right kind of skills today, teachers' pre-service training and continuing education are essential. In Finland, teachers are required to treat the children and young people as individuals and help them to proceed according to their own capabilities⁵. Learners should experience success and joy of learning.

See [HERE](#) a short video about teacher selection and the broader approach to teaching in Finland⁶.

An example of teaching the skills needed today is the introduction of coding as a mandatory class starting from first grade (preschool, even). There are enough common elements, but Finland seems to have taken coding farthest, positioning coding as a new learning skill to complement reading, writing, drawing, and calculating. Finland (and Italy) treat coding as a basic tool that permeates all teaching whereas in other European countries, coding happens as part of ICT courses, or as separate coding courses. Further information on this subject can be found here:

- [Finland Eyes Programming Classes for Elementary School Students](#)
- [Finland is a pioneer in teaching coding at schools in Europe](#)
- [Computer programming and coding - Priorities, curricula and initiatives across Europe](#)⁷
- [Finland to remove cursive handwriting from education curriculum](#)

PISA

An English teacher's explanation of Finland's PISA successes

Education in Finland is more concerned with ensuring that every student does well instead of focusing on competition, tracking and ranking.

The result is that every student learns what they need to learn and does quite well at the basics, but not much more. There are very few high achievers. In fact on the recent PISA assessment, while ranking far above the international average, Finland only had around 15% reach a top performing category (against 30 to 50% for Asian Nations). Yet, at the same time Finland had very few students on the low spectrum!

⁵ [Finnish Education in a nutshell](#), Finnish Ministry of Education, 2013

⁶ World Innovation Summit for Education (WISE)

⁷ Source: europeanschoolnet.org

Math classrooms in Finland do not focus on calculations, solving algebraic equations, or so called “formal mathematics”. At the same time, the PISA exam does not measure a student’s ability to calculate the answer to a directly given math problem. The students must read the problem, assess the situation, and figure out the answer. Finnish students have learned how to read through a problem, think it through logically and actually attempt to find an answer before they give up.

Also, as early as 4th or 5th grade Finnish students learn the basics of physics. They have a physics class every year in middle school and high school. Most of the math teachers are also qualified to teach physics. They prefer physics because it is actually applied mathematics. And since PISA test questions are more geared toward an understanding of physics than actual mathematics, Finnish students get another specific advantage.

Further information on critical studies of the Finnish educational model after its decline in PISA results (post 2012)

- [Are top-performing Finnish students being pushed enough?](#), by Dr Juha Ylä-Jääski, CEO, [Technology Academy Finland](#)
- <http://www.businessinsider.com/why-finland-fell-in-the-pisa-rankings-2013-12?IR=T>

Explanation of the declining results in PISA 2012 and recommendations⁸

- The focus on explaining the past to thousands of education tourists have shifted attention away from developing Finland’s own school system
- The high-profile of PISA have led other nations to alter their curricula (f.e. usage of PISA questions to shape lessons and coaching students to take PISA-like tests)
- What other nations have learned from Finland and put into practice has necessarily brought down Finland’s results

In a [presentation](#) on Educational Change in Finland at Harvard’s Askwith Forum in April 2013, M. Sahlberg pointed out some key elements of the Finnish success:

3 key governmental policies:

- Equity issue: Finland invested heavily in equity in the 1970’s and 80’s
- Invest and act early (share of government spending on children)
- Teacher professionalism

5 recommendations:

- more collaboration, less competition
- prevention is cheaper than repair
- school readiness: school ready for children, not children ready for school
- more gender equality & child friendly policies
- enhanced equity improves quality

⁸ By Pasi Sahlberg, visiting Professor of Practice at Harvard University’s Graduate School of Education

Entrepreneurship education in Finland

Entrepreneurship is the individual's ability to translate ideas into action. It encompasses creativity, innovation and risk-taking, as well as the ability to plan and direct action towards the achievement of goals. These qualities support everyday life in education, at work, in leisure activities and in other societal activities. These qualities are needed in entrepreneurship, but they also enhance workers' awareness of their work and help them seize opportunities.

The first stage in the promotion of entrepreneurship in Finland can be said to be a period of economic education in the 1950s and 1960s, the second phase entrepreneurial training in the 1980s and the third the era of entrepreneurship education in the 1990s, when the concepts of entrepreneurship education and entrepreneur training began to gain ground. The first Finnish reference to entrepreneur training on the net is from 1993 and to entrepreneurship education from 1997.

During the economic recession in the early 1990s the content of entrepreneurship education gained a labour and industrial policy connotation, primarily owing to the difficult employment situation at the time. It was seen that the role of the school was to educate young people to consider self-employment at least at some stage in their lives instead of always seeking employment in the service of others. It was seen that society must offer education and training to help people earn their living independently or improve their employability. This is the stage in entrepreneurship education we now find ourselves in.

In 1992 the National Board of Education appointed a committee to define the concept of entrepreneurship and to propose and apply different development paradigms based on a review of the situation at that time. This set off strong networking between different stakeholders.

The curricular development launched by the committee resulted in a more systematic inclusion of entrepreneurship in the basic education, upper secondary and vocational core curricula of 1994–1995. In addition, plans were made for teachers' in-service training relating to entrepreneurship, a further qualification for entrepreneurs, and materials suitable for different forms of education.

The initiative for a "Decade of Entrepreneurship", from 1995 to 2005, came from various organisations: the 3 Ministries of Trade and Industry, Labour and Education, the National Board of Education and the Federation of Finnish Employers (present Confederation of Finnish Industries EK). The decade had three themes: entrepreneurship in society, entrepreneurship in securing and developing jobs and the development and promotion of entrepreneurship. The aim was to create 100 000 new jobs.

The current basic education core curriculum was adopted gradually from 2003 to 2006, the upper secondary core curriculum in 2005. In them, entrepreneurship is linked to participatory, active citizenship and constitutes one of the seven cross-curricular themes in basic education and one of the six themes in upper secondary schools. Permeating all subjects and geared to integrate teaching, these themes are considered to be key priorities in education and training, and a value-based response to the challenges of the day.

Some universities have drawn up entrepreneurship strategies of their own. The polytechnics adopted a joint strategy in 2006. It includes an aim that in 2010 one in seven polytechnic graduates will have embarked on a career in business within ten years of their graduation.

A significant restructuring of certain higher educational institutions took place in 2010 when Aalto University was established by merging the Helsinki University of Technology, the Helsinki School of Economics, and the University of Art and Design in Helsinki. The ensuing multidisciplinary group work and entrepreneurial spirit have encouraged novel research ideas and innovations across all the disciplines. According to Cardwell & Louko⁹, universities alone do not build and generate prosperity but their positive impact falls short if they are not strongly integrated with other players in the ecosystem.

In 2002 the Ministry of Education appointed an entrepreneurship steering group; the present 3rd group's mandate will end with the current Government term. In addition, the National Board of Education has appointed a qualification committee for entrepreneurship up to July 2010. A higher education cooperation group on entrepreneurship issued its recommendations at the end of 2008.

The Finnish strategy for entrepreneurship education

Since 2009, Finland has a national strategy for EE, "[Guidelines for entrepreneurship education](#)", which is led by the Ministry of Education and Culture (MoEC) and covers the period 2009-2015. The guidelines were prepared through broad-based cooperation with different operators in the entrepreneurial community. The partners included a range of government and national agencies, education organisations, regional authorities and business organisations.

The Guidelines address all levels: from early childhood education and care to adult education and higher education and aim to develop active citizenship, enhance creativity and innovation in education and training, create a positive entrepreneurial culture and promote business start-up.

There are 11 objectives in the Guidelines for entrepreneurship education that were expected to be achieved by 2015 and most of which are well implemented:

- networking between EE partners is intensified at international/national/regional/local levels
- measures for EE primarily originate at regional and local levels
- regional expertise centres cover the whole country
- EE has become a solid part of core curricula and a stronger part of school-specific curricula
- EE is integrated more robustly into school and business strategies and development plans
- entrepreneurship studies are included in vocational core curricula
- higher education institutions have incorporated entrepreneurship in their overall strategies
- EE is part of the initial training of the teachers who will be responsible for this theme
- increased availability of CPD and secondments relating to EE
- learning environments promoting networking for ITE and CPD, f.e using virtual environments

⁹ Accelerating innovation-based entrepreneurship at Aalto University, Cardwell, W and Louko, P. (2012)

One of the main aspects of the strategy is the extended collaboration between different institutions and the business sector to ensure a coherent strategy. Here the list of all partners:

The Ministry of Education and Culture	The Ministry of Employment and the Economy
The National Board of Education	The Central Chamber of Commerce
Association of Local and Regional Authorities	Confederation of Finnish Enterprises
Trade Union of Education in Finland	Federation of Finnish Enterprises
Centre for School Clubs	Confederation of Agricultural Producers
Junior Achievement - Young Enterprise Finland	Economic Information Office
University of Oulu/Kajaani	Finnish 4H Federation
University of Turku/teacher training school	Finnish Enterprise Agency
Lappeenranta University of Technology	Junior Chambers of Commerce

Stakeholders from the business sector are involved and integrated in developing the national policy framework. To strengthen the co-operation with companies and working life organizations, teacher-training councils in all vocational teacher-training units have members from organizations representing employment, working life and entrepreneurship. In-the-job-learning and co-operation with companies and working life is an integral part of vocational education. Both company visits by schools and school visits by companies are included in the programme. Additionally, various measures have been set up in the development plan by the Ministry of Education and Culture to strengthen the links between education and working life. The Federation of Finnish Enterprises for instance provides training for entrepreneurs and is also involved in designing national policies for entrepreneurship education and regularly carries out surveys of its activities.

At the end of 2007, Finland had more entrepreneurs than ever before. The 228,300 business-owners represented 9% of the employed. The baby-boom generation now about to retire includes tens of thousands of ageing entrepreneurs who are considering a transfer of their business to the next generation. Success in this transition is vital for the entrepreneurs themselves and for society at large. Yet, in Finland, business owners aged under 35 are relatively rare, making up only 18% of all entrepreneurs. This is why intensified measures are needed to encourage young people to embark on a business career. Entrepreneurs often have a vocational or professional education. Over 30% have a vocational qualification and an ever growing number of them have a university or polytechnic degree. In the future, the Ministry of Education expects Finnish entrepreneurship to be based more solidly on both vocational and professional qualifications.

Further information and evaluations of the EE can be found here:

- [Education and Research 2011-16. A development plan.](#) Reports of the Ministry of Education and Culture
- [Development Strategy for Entrepreneurship in the Creative Industries Sector for 2015](#)
- [Dev. prog. for business growth & internationalism in the creative industries 2007-13](#)
- [Guide for partnerships between schools and businesses.](#) Economic Information Office
- [Lappeenranta University of Technology](#), Centre for Training and Development
- [Guidelines for entrepreneurship education](#), Ministry of Education, Finland (2009)
- [Teachers as Learners Promoting Entrepreneurship Education](#), Mattila, Rytölä (2009)

Entrepreneurship Education in the curriculum

In the first and second grade, EE is integrated within cross-curricular themes: “Personal Growth” and “Participatory Citizenship and Entrepreneurship”, which are addressed through core and optional subjects and in joint events. In addition, the subject “Social Studies” (grades 7-9) includes EE elements. At ISCED 3, the national core curriculum features “Social Studies”, which includes EE.

A continuum of learning results from basic throughout secondary education and is ensured by the structure of the curriculum. In the first and second grade, the main learning outcome for “Participatory Citizenship and Entrepreneurship” is to develop the skills needed for both civic involvement and basic entrepreneurial skills (such as forming critical opinions, dealing with conflict, being enterprising and acting innovatively). In the third grade, in “Social Studies”, pupils learn the fundamentals of entrepreneurship and understand its importance to society’s well-being and to the economy.

The national core curriculum requires schools to create a study environment where students set their own objectives and learn to work both independently and collaboratively. The module “Entrepreneurship and Entrepreneurial Activity” is compulsory for all qualifications and ensures that students are able to assess and recognise their own skills and strengths, make their own business plans and assess the value of being an entrepreneur.

Teachers’ education and support

The central level recommendations are presented in the strategy. There is institutional autonomy for integrating entrepreneurship education into [ITE](#) curricula. A notable exception is [YVI](#), a national project for promoting entrepreneurship education (especially in vocational and academic teacher education) in Finland (2010-14). The project brought together more than 30 organisations to develop an entrepreneurship programme for teacher education. Curricula for ITE were developed jointly, as were new pedagogical models and tools. A range of organisations offer [CPD](#) including the [Finnish National Board of Education](#) (via a web page offering supporting material).

Teacher training institutions have the autonomy to decide on their curriculum with some offering optional courses on entrepreneurship. The main national contributors (except for CPD) are now regional and local stakeholders. The learning concept of “Me & MyCity” includes teacher training, learning materials for 10 lessons and a day-long visit to the “Me & MyCity” learning environment (see a short presentation [HERE](#)). In Finland, the majority of sixth-graders aged 12 to 13 participate in “Me & MyCity” under the direction of their teacher.

Nordic background

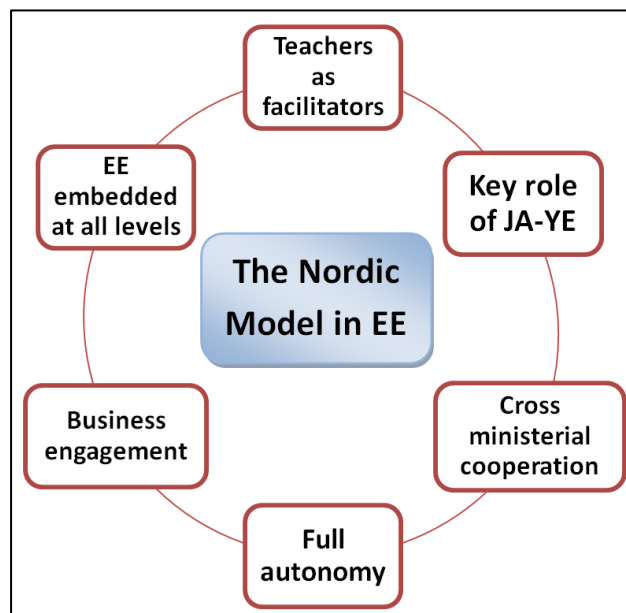
Through years of developing entrepreneurship education, all the Nordic countries have adopted certain common features which distinguish them from other countries. For example, in Asia, the strategy for entrepreneurship education is generally formulated only by the Education Authority, and entrepreneurship education is mainly offered by higher education.

- In general, Finland, Denmark and Norway have advanced well in implementing their entrepreneurship education strategies, whereas Sweden is following. Overall, there is still room for

improvement in teacher education and training, especially how to motivate teachers to engage in entrepreneurship education, and in the area of continuing professional training.

- The Nordic countries, have established a distinguished “Nordic model in entrepreneurship education”. The model includes the following common features:

- Key role of Junior Achievement – Young Enterprise organizations
- Cross ministerial cooperation
- Full autonomy of implementing entrepreneurship education by educational institutions as long as they comply with National Qualification Framework or steering documents
- Intensive business engagement
- Entrepreneurship education embedded at all levels and types of education
- Teachers’ role to function as facilitators



European background

Entrepreneurship is much to the fore at the European level: [Initiative and entrepreneurship](#) are listed among the future key competencies which every European citizen must have.

More concretely, the European Commission initiated a project called “[Best](#)” to review the situation in each country by collecting indicator data concerning EE.

Status and best practices of Entrepreneurship Education¹⁰

- The following main obstacles were identified:
 - Teachers' motivation and engagement in entrepreneurship education
 - Lack of sufficient funding and human resources
 - Entrepreneurship education perspective not incorporated in the current examination system
 - Insufficient interaction between the policy makers and practitioners
 - Lack of national platforms for good practices
 - A need for curriculum and tool development
- The common characteristics of good practices were:
 - intensive collaboration with business sector
 - networks with external stakeholders
 - high level of international cooperation and media exposure
 - focus on experiential learning
 - the ability to cope and manage with the scarce human resources and funding
- Factors promoting good practices include:
 - organizations specializing in their own strongest area and leveraging others' expertise
 - effective communication and promotion strategy
 - deliberately matching and selecting partners from business sector

¹⁰ This section is extensively based on the NORDIC INNOVATION REPORT 2012:24. Nordic Innovation is an institution under Nordic Council of Ministers that facilitates sustainable growth in the Nordic region.

Overview of the set-up of the Finnish school system

Academic degrees	Vocational degrees	Typical ages
doctor	employment	
licentiate		
master	master (new)	+2-3
bachelor	bachelor	+3-4
upper secondary school (voluntary)	vocational school (voluntary)	18-19
		17-18
		16-17
comprehensive school (compulsory)		15-16
		14-15
		13-14
		12-13
		11-12
		10-11
		9-10
		8-9
pre-school		7-8
		6-7

Sources:

- Guidelines for entrepreneurship education: Publications of the Ministry of Education 2009:9
- European Commission/EACEA/Eurydice, 2016. EE at School in Europe.

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